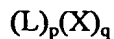


WHAT IS CLAIMED IS:

1. A compound of formula I:



I

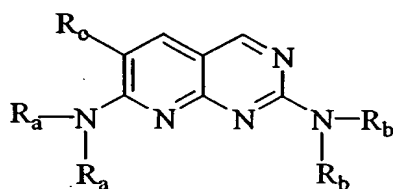
and pharmaceutically acceptable salts thereof; wherein:

p is an integer of from 2 to 10;

q is an integer of from 1 to 20;

each L is a ligand independently selected from the group consisting of:

- (i) a moiety of formula III:



III

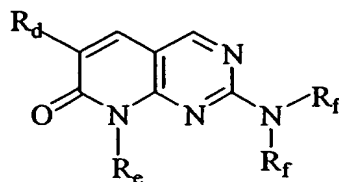
wherein

each R_a is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, aryl, heteroaryl and a covalent bond linking the moiety to the linker;

each R_b is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, aryl, heteroaryl and a covalent bond linking the moiety to the linker;

R_c is selected from the group consisting of aryl, alkaryl, heteroaryl and heterocycle; provided one and only one of R_a and R_b comprises a covalent bond linking the moiety to the linker;

- (ii) a moiety of formula IV:



IV

wherein

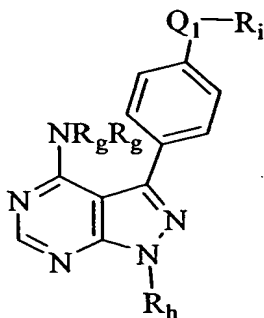
R_d is selected from the group consisting of aryl, alkaryl, heteroaryl and heterocycle;

R_e is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

each R_f is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, aryl, heteroaryl and a covalent bond linking the moiety to the linker;

provided one and only one of R_e or R_f comprises a covalent bond linking the moiety to the linker;

(iii) a moiety of formula V:



V

wherein

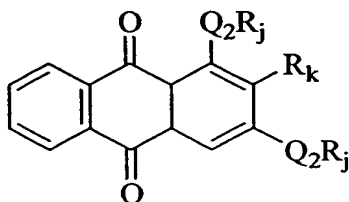
each R_g is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl and acyl;

R_h is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl and acyl;

R_i is a covalent bond linking the moiety to the linker;

Q_1 is NR_j , O, S, alkylene or a covalent bond, where R_j is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

(iv) a moiety of formula VI:



VI

wherein

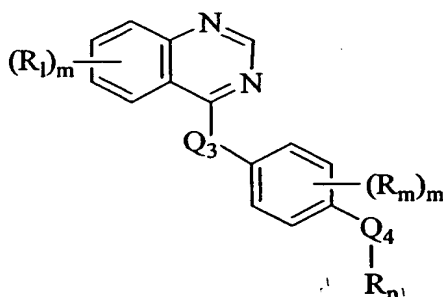
each R_j is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

R_k is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, alkoxy, hydroxy, halogen and -CHO;

each Q_2 is independently NR_j , O and S, where R_j is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

provided one and only one of R_j comprises a covalent bond linking the moiety to the linker;

(v) a moiety of formula VII:



VII

wherein

each R_l and R_m is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

R_n is a covalent bond linking the moiety to the linker;

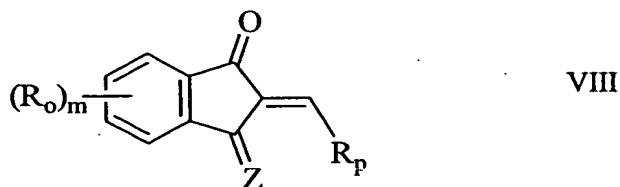
Q_3 is NR_n , O, S or alkylene;

Q_4 is NR_n , O, S, alkylene or a covalent bond, where each R_n in Q_3 and Q_4 is

independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

each m is independently an integer from 1 to 3;

(vi) a moiety of formula VIII:



10 wherein

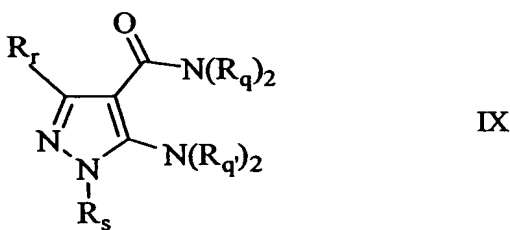
each R_o is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

15 R_p is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker or with $-OZ'$ where Z' is a covalent bond linking the moiety to the linker;

Z is 2H or O;

20 m is an integer from 1 to 3;

(vii) a moiety of formula IX:



wherein

30 each R_q is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl,

substituted cycloalkyl, aryl, heteroaryl, heterocyclic and a covalent bond linking the moiety to the linker;

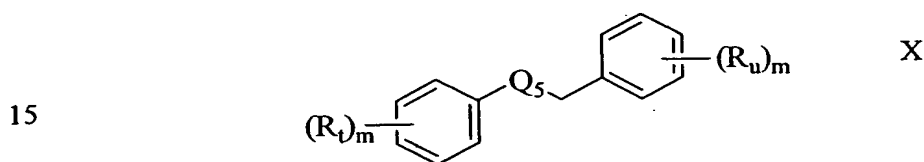
each R_q is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl and acyl;

5 R_s is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl and acyl;

R_r is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker;

10 provided one and only one of R_q or R_r comprises a covalent bond linking the moiety to the linker;

(viii) a moiety of formula X:



wherein

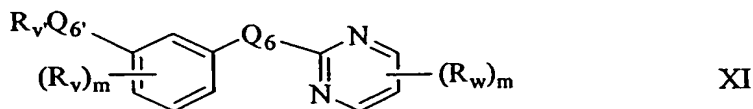
20 each R_t is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

25 each R_u is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy, substituted thioalkoxy and a covalent bond linking the moiety to the linker;

30 Q_5 is NR_t , O, S or alkylene, where R_t is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

each m is independently an integer from 1 to 3;
 provided one and only one of R_u comprises a covalent bond linking the moiety to
 the linker;

(ix) a moiety of formula XI:



10 wherein

each R_v is independently selected from the group consisting of hydrogen, alkyl,
 substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino,
 acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy,
 aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl,
 15 heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

R_v is a covalent bond linking the moiety to the linker;

each R_w is independently selected from the group consisting of hydrogen, alkyl,
 substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino,
 acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy,
 20 aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl,
 heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

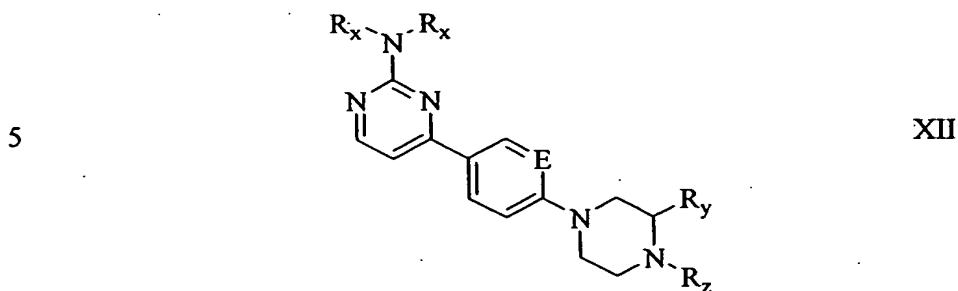
Q_6 is NR_w , O, S or alkylene, where R_w is hydrogen, alkyl, substituted alkyl,
 alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

Q_6 is NR_v , O, S or alkylene, where R_v is hydrogen, alkyl, substituted alkyl,
 25 alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

each m is independently an integer from 1 to 3;

30

(x) a moiety of formula XII:



10 wherein

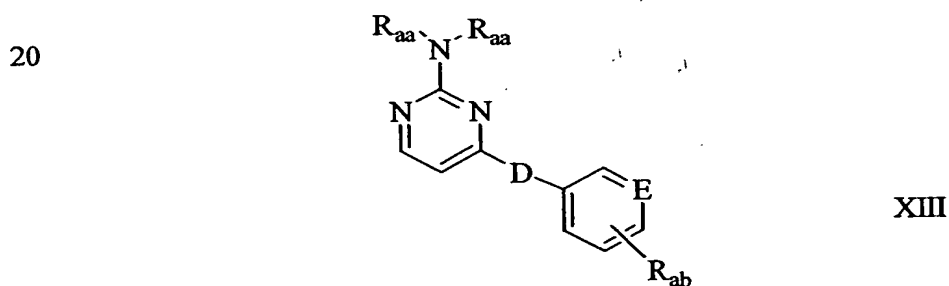
each R_x is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, heteroaryl and heterocyclic;

R_y is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl and substituted alkynyl;

R_z is a covalent bond linking the moiety to the linker;

E is CH or N;

(xi) a moiety of formula XIII:



25

wherein

each R_{aa} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, heteroaryl and heterocyclic;

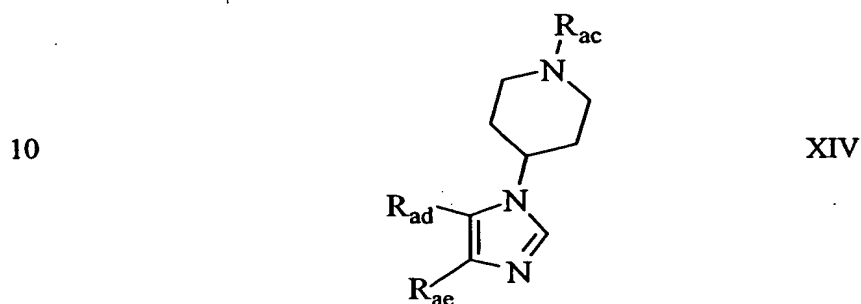
R_{ab} is alkyl, substituted alkyl, alkoxy, substituted alkoxy, amino, substituted amino, thioalkoxy, substituted thioalkoxy, wherein the alkyl, substituted alkyl, alkoxy, substituted

alkoxy, amino, substituted amino, thioalkoxy or substituted thioalkoxy group is substituted with a covalent bond linking the moiety to the linker;

D is a covalent bond, NR_{ab} , O or S, where R_{ab} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

5 E is CH or N;

(xii) a moiety of formula XIV:



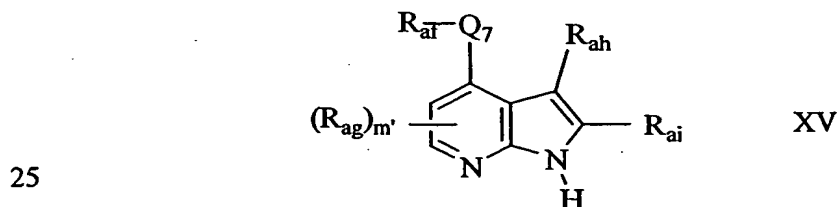
wherein

15 R_{ac} is a covalent bond linking the moiety to the linker;

R_{ad} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, heteroaryl and heterocyclic;

R_{ae} is aryl or heteroaryl;

20 (xiii) a moiety of formula XV:



wherein

R_{af} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl and acyl;

30 each R_{ag} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino,

acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

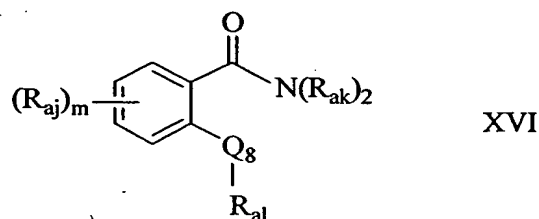
R_{ah} is aryl or heteroaryl;

5 R_{ai} is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker;

Q_7 is NR_{ar} , O, S or alkylene, where R_{ar} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

m' is 1 or 2;

10 (xiv) a moiety of formula XVI:



15

wherein

each R_{aj} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

20

R_{ai} is aryl or heteroaryl;

each R_{ak} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, heteroaryl, heterocyclic, and a covalent bond linking the moiety to the linker;

25

Q_8 is NR_{ar} , O, S or alkylene, where R_{ar} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

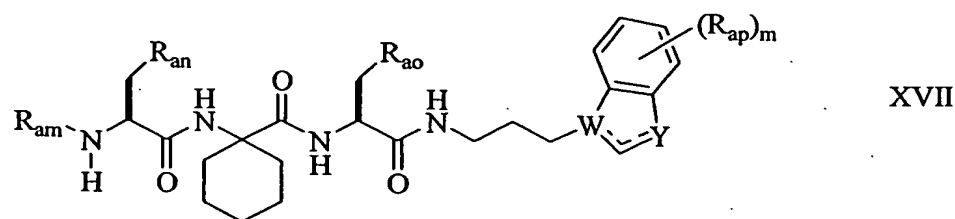
30

m is an integer from 1 to 3;

provided one and only one of R_{ak} comprises a covalent bond linking the moiety to

the linker;

(xv) a moiety of formula XVII:



wherein

10 R_{an} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

R_{ao} is selected from the group consisting of 4-phosphonomethylphenyl, 4-phosphonodifluoromethylphenyl, 3-carboxy-4-carboxymethoxyphenyl and 3,4-dihydroxyphenyl;

15 R_{ap} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

20 each R_{ap} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

25 W is N or CH;

Y is O, S, NH, N-Z', CH₂ or CH-Z', where Z' is a covalent bond linking the moiety to the linker;

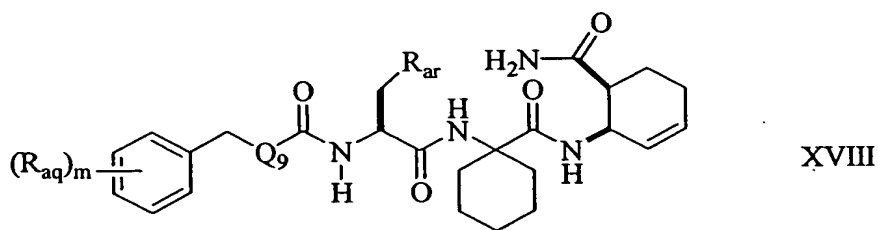
m is an integer from 1 to 3;

30 ----- is an optional double bond;

provided one and only one of R_{an} and Y comprises a covalent bond linking the

moiety to the linker;

(xvi) a moiety of formula XVIII:



wherein

10 each R_{aq} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy, substituted thioalkoxy, a covalent
15 bond linking the moiety to the linker and $-NH-Z'$, where Z' is a covalent bond linking the moiety to the linker;

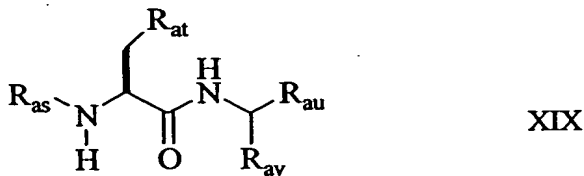
R_{ar} is selected from the group consisting of 4-phosphonomethylphenyl, 4-phosphonodifluoromethylphenyl, 3-carboxy-4-carboxymethoxyphenyl and 3,4-dihydroxyphenyl;

20 Q_9 is $NR_{aq'}$, O, S or alkylene, where $R_{aq'}$ is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

m is an integer from 1 to 3;

provided one and only one of R_{aq} comprises a covalent bond linking the moiety to the linker;

25 (xvii) a moiety of formula XIX:



wherein

R_{as} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

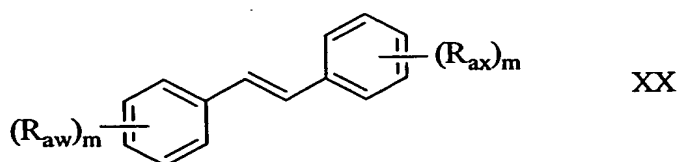
5 R_{at} is selected from the group consisting of 4-phosphonomethylphenyl, 4-phosphonodifluoromethylphenyl, 3-carboxy-4-carboxymethoxyphenyl and 3,4-dihydroxyphenyl;

R_{au} is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker or with $-OZ'$, where Z' is a covalent bond
10 linking the moiety to the linker;

R_{av} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and alkaryl;

provided one and only one of R_{as} and R_{au} comprises a covalent bond linking the moiety to the linker;

15 (xviii) a moiety of formula XX:



20

wherein

each R_{aw} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy,
25 aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

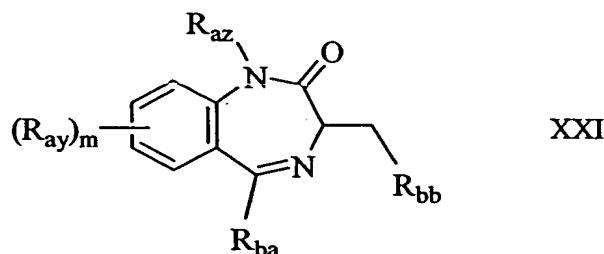
each R_{ax} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy,
30 aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy, substituted thioalkoxy, a covalent

bond linking the moiety to the linker and -OZ', where Z' is a covalent bond linking the moiety to the linker;

each m is independently an integer from 1 to 3;

provided one and only one of R_{ax} comprises a covalent bond linking the moiety to the linker;

(xix) a moiety of formula XXI:



wherein

each R_{ay} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

R_{az} is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, alkaryl, acyl and a covalent bond linking the moiety to the linker;

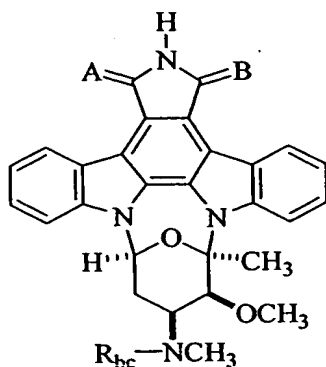
R_{ba} is aryl or heteroaryl;

R_{bb} is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker or with -OZ', where Z' is a covalent bond linking the moiety to the linker;

m is an integer from 1 to 3;

provided one and only one of R_{az} or R_{bb} comprises a covalent bond linking the moiety to the linker;

(xx) a moiety of formula XXII:



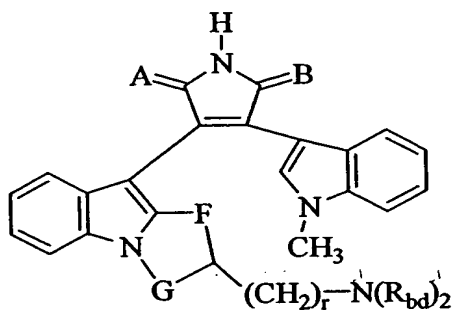
XXII

wherein

R_{bc} is a covalent bond linking the moiety to the linker;

A and B are independently selected from the group consisting of 2H, O and S;

(xxi) a moiety of formula XXIII:



XXIII

wherein

each R_{bd} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

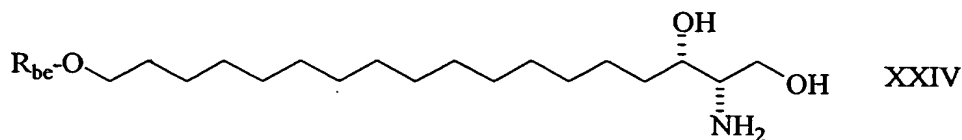
A and B are independently selected from the group consisting of 2H, O and S;

F and G are independently $-CH_2-$ or $-CH_2CH_2-$;

r is an integer from 0 to 2;

provided one and only one of R_{bd} comprises a covalent bond linking the moiety to the linker;

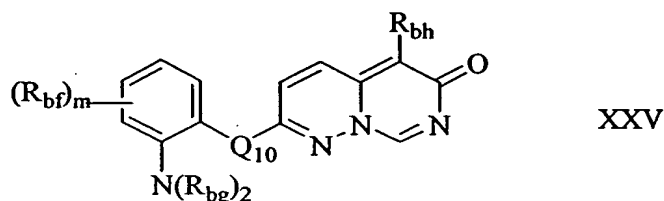
(xxii) a moiety of formula XXIV:



wherein

R_{be} is a covalent bond linking the moiety to the linker;

(xxiii) a moiety of formula XXV:



15

wherein

each R_{bt} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy and substituted thioalkoxy;

each R_{bg} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

25

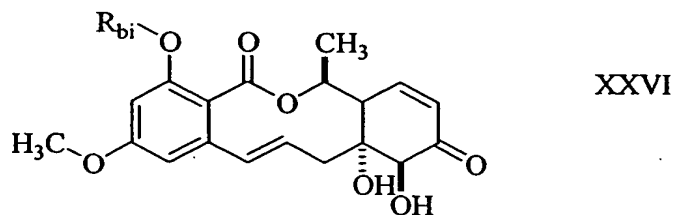
R_{bh} is aryl, heteroaryl or heterocyclic;

Q_{10} is NR_{bt} , O, S or alkylene, where R_{bt} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

m is an integer from 1 to 3;

provided one and only one of R_{bg} comprises a covalent bond linking the moiety to the linker;

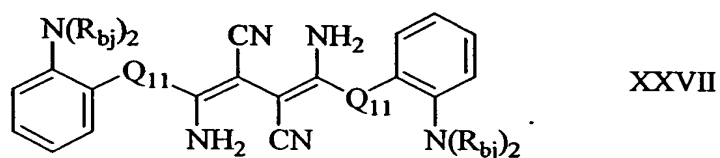
(xxiv) a moiety of formula XXVI:



wherein

R_{bi} is a covalent bond linking the moiety to the linker;

(xxv) a moiety of formula XXVII:



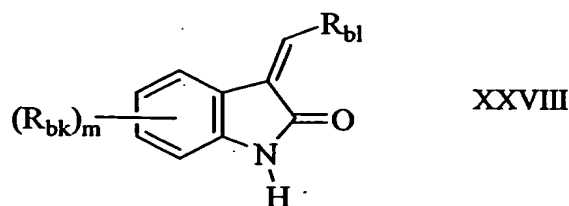
wherein

each R_{bj} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl and a covalent bond linking the moiety to the linker;

Q_{11} is NR_{bj} , O, S or alkylene, where R_{bj} is hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl or acyl;

provided one and only one of R_{bj} comprises a covalent bond linking the moiety to the linker;

(xxvi) a moiety of formula XXVIII:



wherein

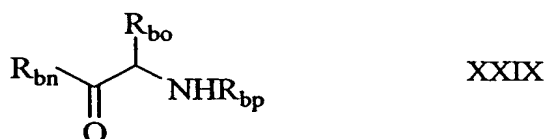
each R_{bk} is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, acyl, acylamino, acyloxy, alkoxy, substituted alkoxy, amino, substituted amino, aminoacyl, aminoacyloxy, aryl, carboxyl, carboxyalkyl, cyano, cycloalkyl, substituted cycloalkyl, halogen, heteroaryl, heterocyclic, hydroxy, oxyacylamino, nitro, thioalkoxy, substituted thioalkoxy, $-SO-R_{bk}$, and

$-SO_2-R_{bk}$, where R_{bk} is alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, aryl, heteroaryl or heterocyclic;

R_{bl} is aryl or heteroaryl, wherein the aryl or heteroaryl group is substituted with a covalent bond linking the moiety to the linker or with $-(CH_2)_u-Z'$, where Z' is a covalent bond linking the moiety to the linker and u is an integer from 1 to 3;

m is an integer from 1 to 3;

(xxvii) a moiety of formula XXIX:



wherein

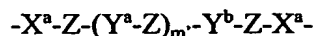
R_{bn} is selected from the group consisting of alkoxy, substituted alkoxy, hydroxy and $-OZ'$, where Z' is a covalent bond linking the moiety to the linker;

R_{bo} is aryl or heteroaryl;

R_{bp} is acyl, alkoxycarbonyl and a covalent bond linking the moiety to the linker;

provided one and only one of R_{bn} and R_{bp} comprises a covalent bond linking the moiety to the linker;

and each X is a linker independently selected from a group of the formula:



wherein

m' is an integer of from 0 to 20;

X^a at each separate occurrence is selected from the group consisting of -O-, -S-, -NR-, -C(O)-, -C(O)O-, -C(O)NR-, -C(S)-, -C(S)O-, -C(S)NR- or a covalent bond;

Z is at each separate occurrence is selected from the group consisting of alkylene, substituted alkylene, cycloalkylene, substituted cycloalkylene, alkenylene, substituted alkenylene, alkynylene, substituted alkynylene, cycloalkenylene, substituted cycloalkenylene, arylene, heteroarylene, heterocyclene, or a covalent bond;

Y^a and Y^b at each separate occurrence are selected from the group consisting of: -C(O)NR'-, -NR'C(O)-, -NR'C(O)NR'-, -C(=NR')-NR'-, -NR'-C(=NR')-, -NR'-C(O)-O-, -N=C(R)-NR'-, -P(O)(OR')-O-, -S(O)_nCR'R''-, -S(O)_n-NR'-, -S-S- and a covalent bond; where *n* is 0, 1 or 2; and

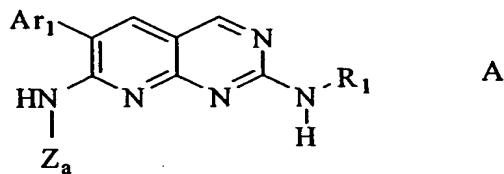
R, R' and R'' at each separate occurrence are selected from the group consisting of hydrogen, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, alkenyl, substituted alkenyl, cycloalkenyl, substituted cycloalkenyl, alkynyl, substituted alkynyl, aryl, heteroaryl and heterocyclic.

2. The compound of Claim 1, wherein *q* is less than *p*.

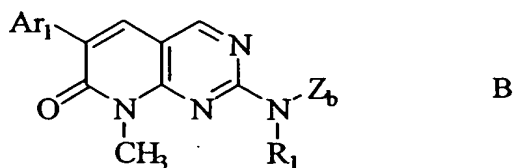
3. The compound of Claim 2, wherein *p* is 2 and *q* is 1.

4. The compound of Claim 1, wherein each ligand is independently selected from the group consisting of:

(i) a moiety of formula A:



(ii) a moiety of formula B:



wherein, in formula A and B,

R₁ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and $-(CH_2)_v-NR_{28}R_{29}$, where v is an integer from 2 to 4;

Ar₁ is selected from the group consisting of an aryl, alkaryl and heterocycle;

R₂₈ is selected from group consisting of hydrogen and alkyl of 1 to 6 carbon atoms;

R₂₉ is selected from the group consisting of 4-pyrimidinyl,

2-methylaminopyrimidin-4-yl, 2-phenoxyprymidin-4-yl,

2-(4-methoxyphenoxy)pyrimidin-4-yl, 2-(4-fluorophenoxy)pyrimidin-4-yl,

2-(4-aminocarbonylphenoxy)pyrimidin-4-yl, 2-(4-ethylphenoxy)pyrimidin-4-yl,

2-(4-benzyloxyphenoxy)pyrimidin-4-yl, 2-(4-cyanophenoxy)pyrimidin-4-yl,

2-(4-hydroxyphenoxy)pyrimidin-4-yl, 2-(3-methoxyphenoxy)pyrimidin-4-yl,

2-(4-phenylphenoxy)pyrimidin-4-yl, 2-(4-phenoxyphenoxy)pyrimidin-4-yl,

2-(3-hydroxyphenoxy)pyrimidin-4-yl, 2-(2-hydroxyphenoxy)pyrimidin-4-yl,

2-(3,4-methylenedioxyphenoxy)pyrimidin-4-yl, 2-(3-fluorophenoxy)pyrimidin-4-yl,

2-(2-fluorophenoxy)pyrimidin-4-yl, 2-(2-methoxyphenoxy)pyrimidin-4-yl,

2-(3-trifluoromethylphenoxy)pyrimidin-4-yl, 2-(3,4-difluorophenoxy)pyrimidin-4-yl,

2-(4-methylsulfonylphenoxy)pyrimidin-4-yl, 2-(4-methoxyphenoxy)pyrimidin-4-yl,

4-pyridinyl, 2-phenoxypyridin-4-yl, 2-(4-methoxyphenoxy)pyridin-4-yl,

2-(4-fluorophenoxy)pyridin-4-yl, 2-(4-benzyloxyphenoxy)pyrimidin-4-yl,

2-(4-cyanophenoxy)pyrimidin-4-yl, 2-(4-hydroxyphenoxy)pyrimidin-4-yl,

2-(3-methoxyphenoxy)pyrimidin-4-yl, 2-(4-phenylphenoxy)pyrimidin-4-yl,

2-(4-phenoxyphenoxy)pyrimidin-4-yl, 2-(3-hydroxyphenoxy)pyrimidin-4-yl,

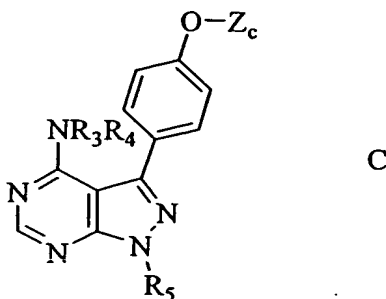
2-(2-hydroxyphenoxy)pyrimidin-4-yl, 2-(3,4-methylenedioxyphenoxy)pyrimidin-4-yl,

2-(3-fluorophenoxy)pyrimidin-4-yl, 2-(2-fluorophenoxy)pyrimidin-4-yl,

2-(2-methoxyphenoxy)pyrimidin-4-yl, 2-(3-trifluoromethylphenoxy)pyrimidin-4-yl,

2-(3,4-difluorophenoxy)pyrimidin-4-yl, 2-(4-methylsulfonylphenoxy)pyrimidin-4-yl, and 2-(4-methoxyphenoxy)pyrimidin-4-yl;

(iii) a moiety of formula C:



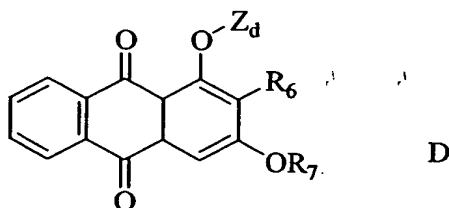
wherein

R₃ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and -CH₂CH₂OCH₃;

15 R₄ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and alkylalkoxy;

R₅ is selected from the group consisting of hydrogen and alkyl of 1 to 6 carbon atoms;

(iv) a moiety of formula D:



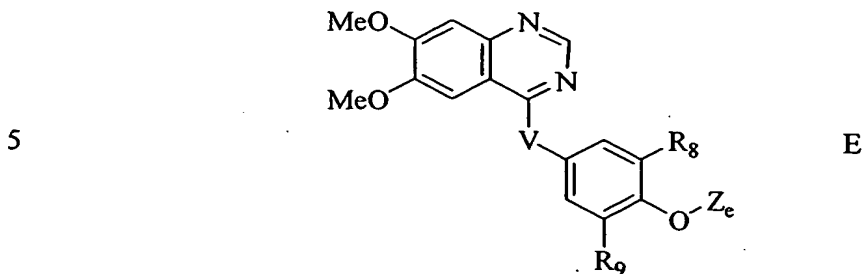
wherein

R₆ is selected from the group consisting of substituted alkyl and -CHO;

R₇ is selected from the group consisting of hydrogen, alkyl and acyl;

30

(v) a moiety of formula E:



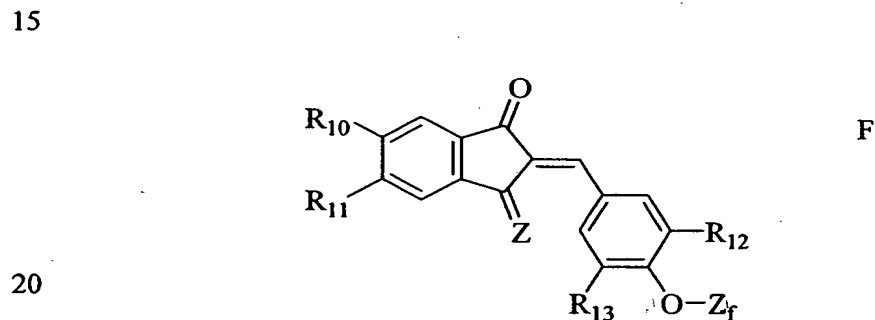
wherein

10 R_8 is selected from the group consisting of hydrogen, alkoxy and halogen;

V is selected from the group consisting of amino, alkyl of 1 to 6 carbon atoms, S and O;

R_9 is selected from the group consisting of hydrogen, alkoxy and halogen;

(vi) a moiety of formula F:



wherein

R_{10} is selected from the group consisting of hydrogen, alkoxy, amino and substituted amino;

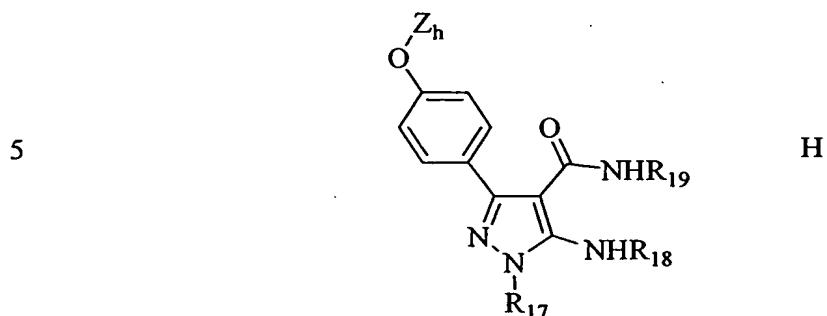
25 R_{11} is selected from the group consisting of hydrogen, alkoxy, halogens, amino, substituted amino and nitro;

R_{12} is selected from the group consisting of hydrogen, hydroxy, alkoxy and halogen;

R_{13} is selected from the group consisting of hydrogen, hydroxy, alkoxy and halogen;

30 Z is selected from the group consisting of 2H and O;

(vii) a moiety of formula H:

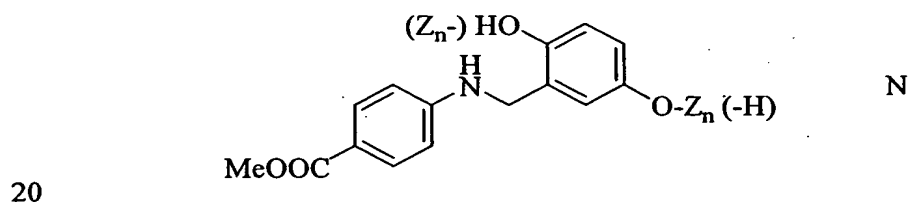


10 wherein

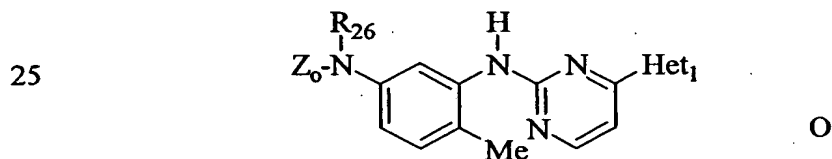
R₁₇ and R₁₈ are independently selected from the group consisting of hydrogen and alkyl of 1 to 6 carbon atoms;

R₁₉ is selected from the group consisting of alkyl of 1 to 6 carbon atoms, -CH₂C(O)OEt, -(CH₂)₃OH, alkaryl, aryl and heteroaryl;

15 (viii) a moiety of formula N:



(ix) a moiety of formula O:

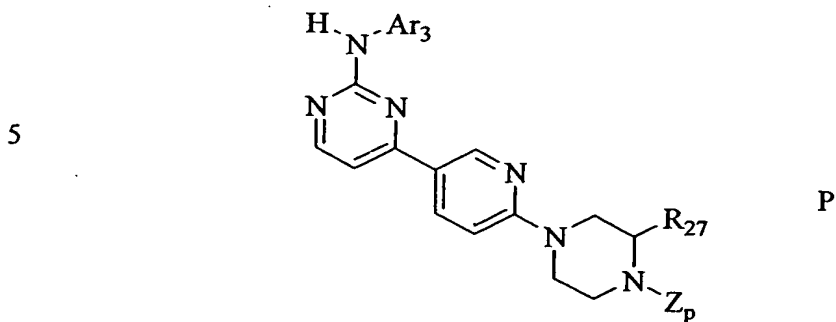


wherein

R₂₆ is selected from the group consisting of hydrogen and acyl;

30 Het₁ is heterocyclic or heteroaryl;

(x) a moiety of formula P:

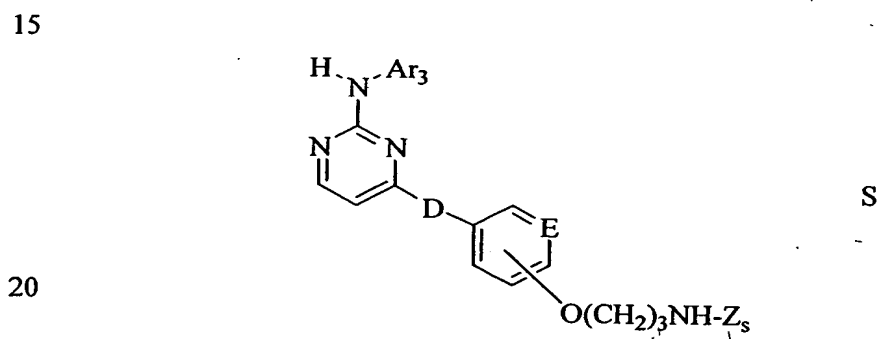


10 wherein

R₂₇ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and substituted alkyl;

Ar₃ is aryl;

(xi) a moiety of formula S:



wherein

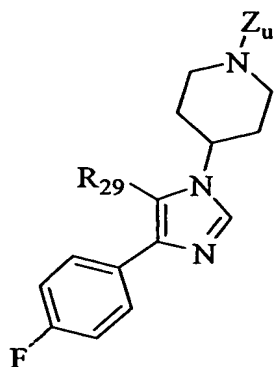
D is selected from the group consisting of a covalent bond, -NH-, -S- and -O-;

E is selected from the group consisting of CH and N;

25 Ar₃ is aryl;

30

(xii) a moiety of formula U:



U

wherein

R_{29} is selected from the group consisting of 4-pyrimidinyl,

2-methylaminopyrimidin-4-yl, 2-phenoxy pyrimidin-4-yl,

2-(4-methoxyphenoxy)pyrimidin-4-yl, 2-(4-fluorophenoxy)pyrimidin-4-yl,

2-(4-aminocarbonylphenoxy)pyrimidin-4-yl, 2-(4-ethylphenoxy)pyrimidin-4-yl,

2-(4-benzyloxyphenoxy)pyrimidin-4-yl, 2-(4-cyanophenoxy)pyrimidin-4-yl,

2-(4-hydroxyphenoxy)pyrimidin-4-yl, 2-(3-methoxyphenoxy)pyrimidin-4-yl,

2-(4-phenylphenoxy)pyrimidin-4-yl, 2-(4-phenoxyphenoxy)pyrimidin-4-yl,

2-(3-hydroxyphenoxy)pyrimidin-4-yl, 2-(2-hydroxyphenoxy)pyrimidin-4-yl,

2-(3,4-methylenedioxyphenoxy)pyrimidin-4-yl, 2-(3-fluorophenoxy)pyrimidin-4-yl,

2-(2-fluorophenoxy)pyrimidin-4-yl, 2-(2-methoxyphenoxy)pyrimidin-4-yl,

2-(3-trifluoromethylphenoxy)pyrimidin-4-yl, 2-(3,4-difluorophenoxy)pyrimidin-4-yl,

2-(4-methylsulfonylphenoxy)pyrimidin-4-yl, 2-(4-methoxyphenoxy)pyrimidin-4-yl,

4-pyridinyl, 2-phenoxy pyridin-4-yl, 2-(4-methoxyphenoxy)pyridin-4-yl,

2-(4-fluorophenoxy)pyridin-4-yl, 2-(4-benzyloxyphenoxy)pyrimidin-4-yl,

2-(4-cyanophenoxy)pyrimidin-4-yl, 2-(4-hydroxyphenoxy)pyrimidin-4-yl,

2-(3-methoxyphenoxy)pyrimidin-4-yl, 2-(4-phenylphenoxy)pyrimidin-4-yl,

2-(4-phenoxyphenoxy)pyrimidin-4-yl, 2-(3-hydroxyphenoxy)pyrimidin-4-yl,

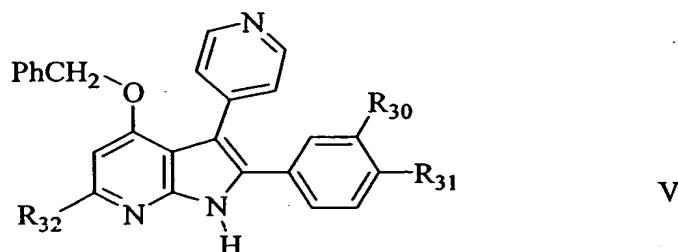
2-(2-hydroxyphenoxy)pyrimidin-4-yl, 2-(3,4-methylenedioxyphenoxy)pyrimidin-4-yl,

2-(3-fluorophenoxy)pyrimidin-4-yl, 2-(2-fluorophenoxy)pyrimidin-4-yl,

2-(2-methoxyphenoxy)pyrimidin-4-yl, 2-(3-trifluoromethylphenoxy)pyrimidin-4-yl,

2-(3,4-difluorophenoxy)pyrimidin-4-yl, 2-(4-methylsulfonylphenoxy)pyrimidin-4-yl, and 2-(4-methoxyphenoxy)pyrimidin-4-yl;

(xiii) a moiety of formula V:



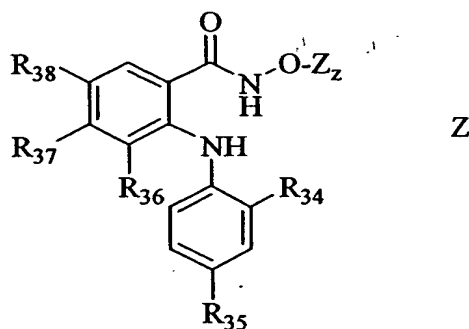
10 wherein

R₃₀ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms, halogen and alkoxy;

R₃₁ is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms, halogen, alkoxy and Z_v;

R₃₂ is selected from the group consisting of hydrogen, amino, substituted amino, alkoxy, -NHCOCH₃, and Z_v, provided one and only one of R₃₁ and R₃₂ is Z_v; and

(xiv) a moiety of formula Z:



wherein

R₃₄ is selected from the group consisting of hydrogen, hydroxy, alkyl, alkoxy, halogen and substituted alkyl;

R₃₅ is selected from the group consisting of hydrogen and halogen;

R₃₆, R₃₇, and R₃₈ are selected from the group consisting of hydrogen, -NO₂, alkyl,

substituted alkyl, amino, substituted amino, alkoxy, hydroxy and halogen;

and further wherein $Z_a, Z_b, Z_c, Z_d, Z_e, Z_f, Z_h, Z_n, Z_o, Z_p, Z_s, Z_u, Z_v$, and Z_z are covalent bonds linking the moiety to the linker;

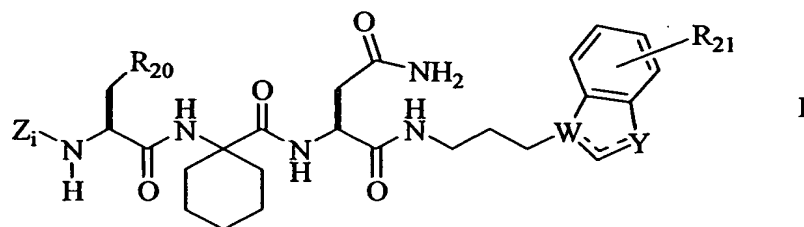
and stereoisomers and analogs thereof.

5

5. The compound of Claim 1, wherein each ligand is independently selected from the group consisting of:

(i) a moiety of formula I:

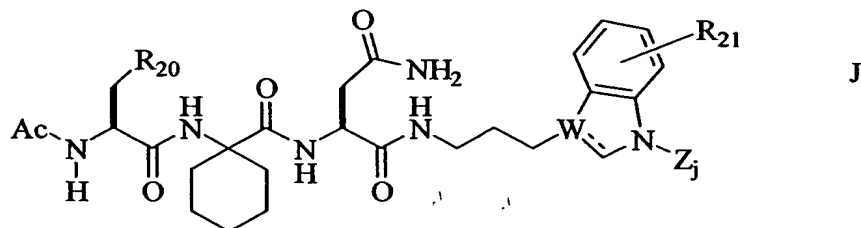
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15

(ii) a moiety of formula J:

20



wherein, in formula I and J,

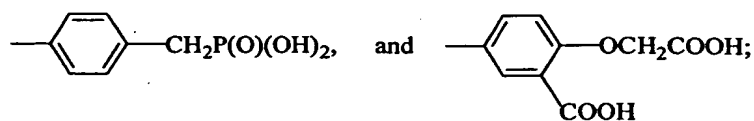
W is selected from the group consisting of N and CH;

25

Y is selected from the group consisting of O, S and NH;

R_{20} is selected from the group consisting of:

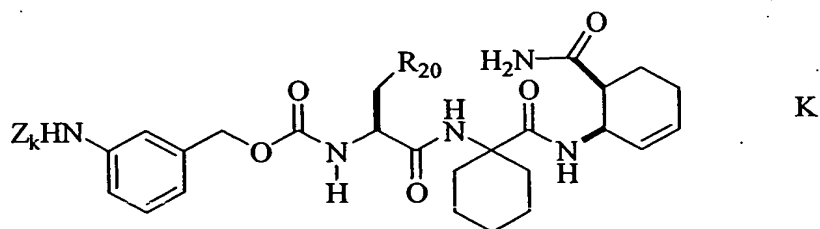
30



R_{21} is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms, alkoxy, amino and substituted amino;

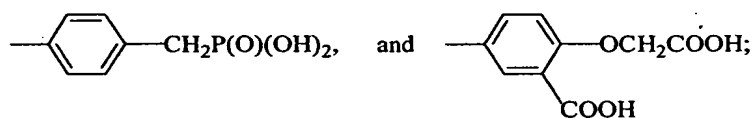
----- is an optional double bond;

(iii) a moiety of formula K:

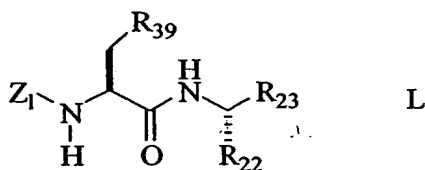


10
wherein

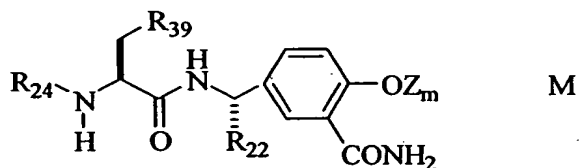
R_{20} is selected from the group consisting of:



(iv) a moiety of formula L:



(v) a moiety of formula M:

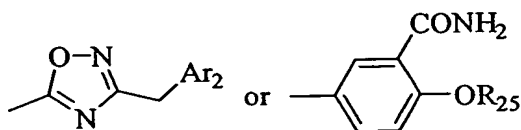


30
wherein, in formula L and M,

R_{22} is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and substituted alkyl;

R_{23} is

5

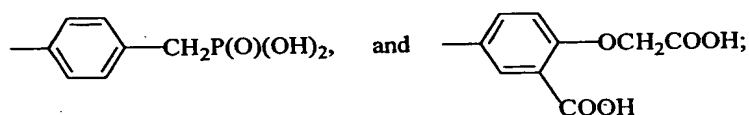


R_{24} is selected from the group consisting of hydrogen and acyl;

10

R_{25} is selected from the group consisting of alkyl and cycloalkyl;

R_{39} is selected from the group consisting of



15

Ar_2 is selected from the group consisting of alkyl of 1 to 6 carbon atoms, substituted alkyl and aryl;

and further wherein Z_i , Z_j , Z_k , Z_l , and Z_m are covalent bonds linking the moiety to

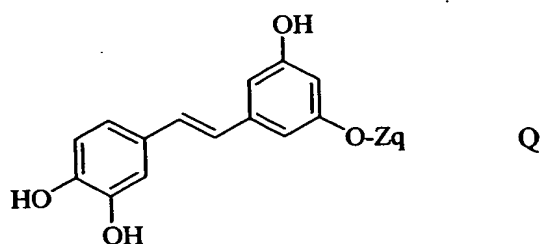
20

the linker;

and stereoisomers and analogs thereof.

6. The compound of Claim 1, wherein each ligand is a moiety of formula Q:

25



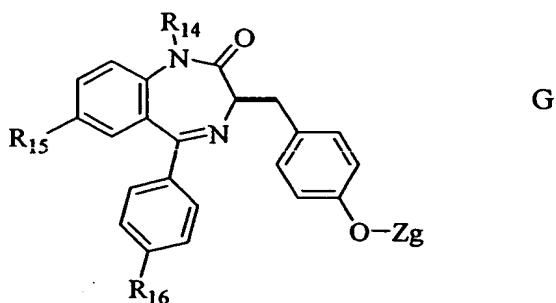
30

wherein

Z_q is a covalent bond linking the moiety to the linker;

and stereoisomers and analogs thereof.

7. The compound of Claim 1, wherein each ligand in the compound of formula I is a moiety of formula G:



wherein

R_{14} is selected from the group consisting of hydrogen, alkyl of 1 to 6 carbon atoms and alkaryl;

R_{15} is selected from the group consisting of hydrogen, alkoxy and halogen;

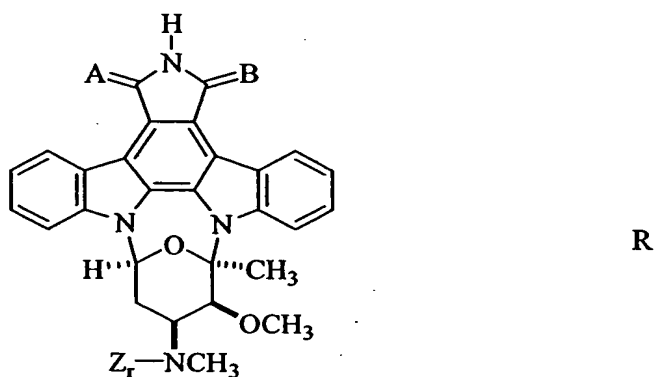
R_{16} is selected from the group consisting of hydrogen, alkoxy, hydroxy and halogen;

and further wherein Z_g is a covalent bond linking the moiety to the linker;

and stereoisomers and analogs thereof.

8. The compound of Claim 1, wherein each ligand is independently selected from the group consisting of:

(i) a moiety of formula R:

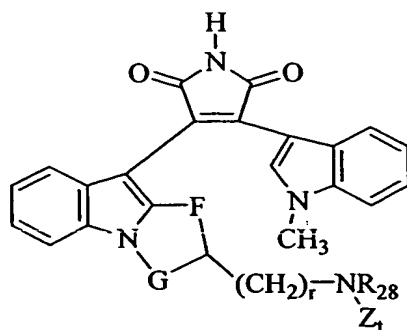


wherein

A and B are independently selected from the group consisting of 2H, S and O;

(ii) a moiety of formula T:

5



T

10

wherein

F is selected from the group consisting of $-CH_2-$ and $-CH_2CH_2-$;

G is selected from the group consisting of $-CH_2-$ and $-CH_2CH_2-$;

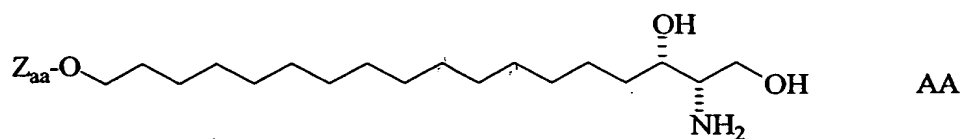
15

R_{28} is selected from the group consisting of hydrogen and alkyl of 1 to 6 carbon atoms;

r is 0, 1, or 2; and

(iii) a moiety of formula AA:

20



AA

25

linker;

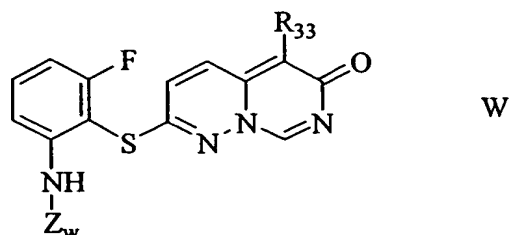
and further wherein Z_r , Z_1 and Z_{aa} , are covalent bonds linking the moiety to the

and stereoisomers and analogs thereof.

30

9. The compound of Claim 1, wherein each ligand in the compound of formula I is independently selected from the group consisting of:

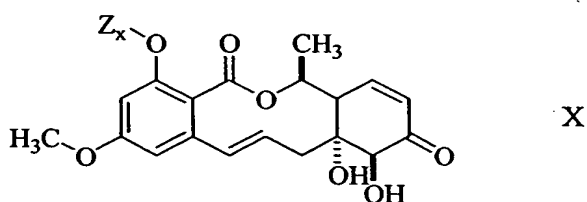
(i) a moiety of formula W:



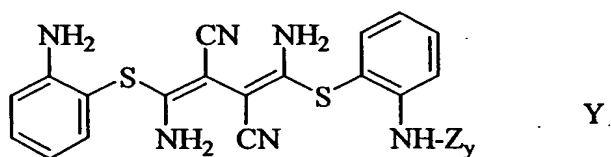
10 wherein

R₃₃ is selected from the group consisting of aryl and heterocyclic;

(ii) a moiety of formula X:



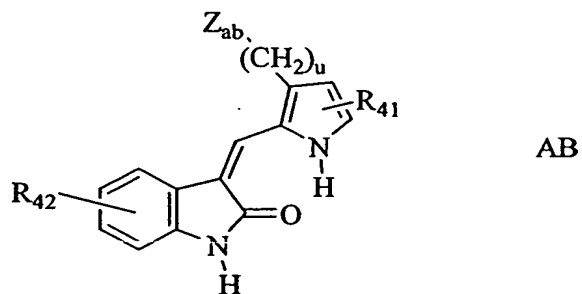
20 (iii) a moiety of formula Y:



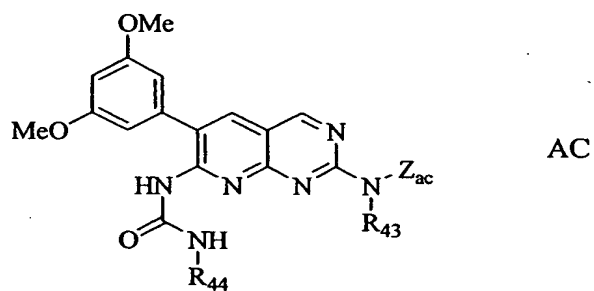
and further wherein Z_w, Z_x and Z_y are covalent bonds linking the moiety to the linker; and stereoisomers and analogs thereof.

10. The compound of Claim 1, wherein each ligand is independently selected from the group consisting of:

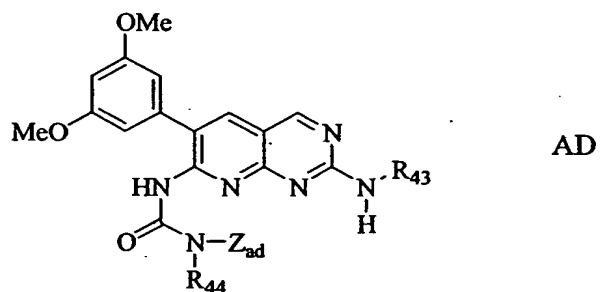
(i) a moiety of formula AB:



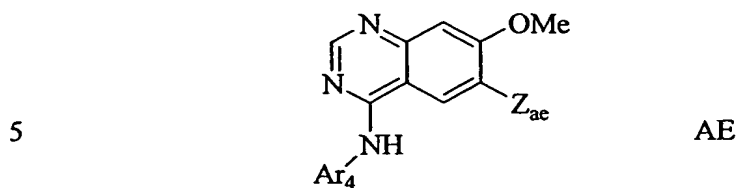
(ii) a moiety of formula AC:



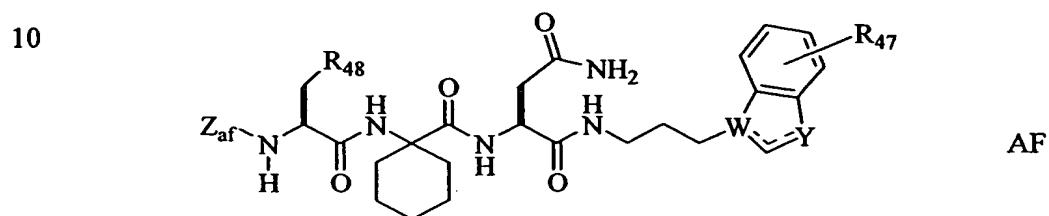
(iii) a moiety of formula AD:



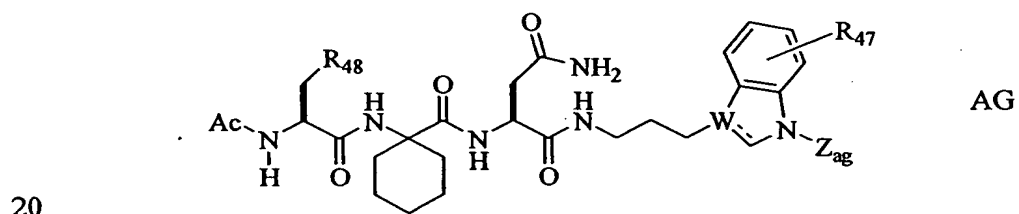
(iv) a moiety of formula AE:



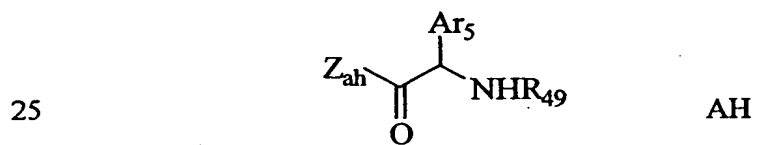
(v) a moiety of formula AF:



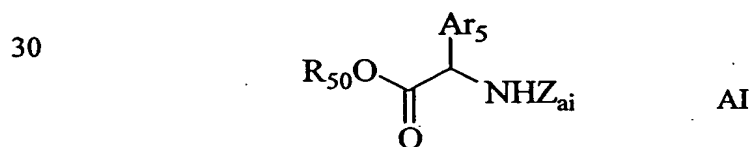
15 (vi) a moiety of formula AG:



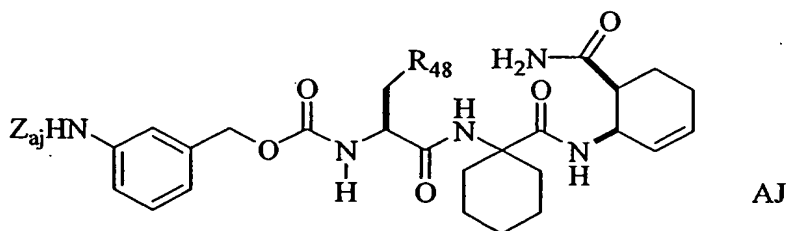
(vii) a moiety of formula AH:



(viii) a moiety of formula AI:



(vix) a moiety of formula AJ:



10 wherein

R_{41} is independently selected from the group consisting of hydrogen, 4-CH₃, 5-CH₃, and 4,5-di-CH₃;

R_{42} is independently selected from the group consisting of hydrogen, CH₃, -F, -Cl and

15 -NO₂;

R_{43} is independently selected from the group consisting of -Z_{ac}, hydrogen, -(CH₂)_v-NR₄₅Z_{ac} and -(CH₂)_v-NR₄₅R₄₆;

R_{44} is independently selected from the group consisting of -Z_{ad}, hydrogen, -CH₃, -CH₂CH₃ and t-butyl;

20 R_{55} is independently selected from the group consisting of hydrogen, -CH₃, -CH₂CH₃ and -CH₂CH₂NMe;

R_{46} is independently selected from the group consisting of hydrogen, -CH₃ and ethyl;

25 R_{47} is independently selected from the group consisting of hydrogen, 2-CH₃, 3-CH₃, 5-CH₃, 5-Cl, 5-OCH₃ and 5-N(CH₃)₂;

R_{48} is independently selected from the group consisting of p-C₆H₄-CH₂P(O)(OH)₂, p-OCH₂COOH-m-COOH-C₆H₃, p-C₆H₄-OP(O)(OH)₂ and p-C₆H₄-CF₂P(O)(OH)₂;

R_{49} is independently selected from the group consisting of acetyl, t-BOC, -Cbz, and -C(O)Ph;

30 R_{50} is independently selected from the group consisting of C₁₋₅ alkyl (preferably methyl, ethyl and propyl);

Ar₄ is independently selected from the group consisting of 4-Cl-3-F-C₆H₃, 3-Br-C₆H₄, 3-Cl-C₆H₄, 3-F-C₆H₄, 4-Br-C₆H₄, 4-Cl-C₆H₄, and 3,4-dihalophenyl;

Ar₅ is independently selected from the group consisting of C₆H₅, p-C₆H₄OH, and other substituted phenyl groups;

5 u is an integer from 1 to 3,

 v is an integer from 2 to 4,

 W is N or CH,

 Y is CH or N;

 and further wherein Z_{ab}, Z_{ac}, Z_{ad}, Z_{ae}, Z_{af}, Z_{ag}, Z_{ah}, Z_{ai}, and Z_{aj} are covalent bonds
10 linking the moiety to the linker;
 and stereoisomers and analogs thereof.

11. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of any of Claims 1-10.

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12. A method of treating a disease or medical disorder mediated by a protein kinase, the method comprising administering to a mammal a pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of any of Claims 1-10.

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